Claims

I claim:

1. A process that includes searching the digital data for detection criteria and adjusting neighboring point(s), whereby the digital data is degraded in quality but the original signal is recoverable.

2. The process of claim 1 in which the detection criteria involves a pseudo-random sequence, thereby increasing the difficulty to illegally removing the content degradation.

3. The process of claim 1 in which the adjustment of neighboring point(s) involves a pseudo-random sequence, thereby increasing the difficulty to illegally removing the content degradation.

4. The process in claim 1 in which the detection criteria includes a threshold crossing, thereby the degradation process is simple and efficient.

5. The process in claim 4 in which the value of the threshold is a pseudo-random sequence, thereby increasing the difficulty of illegally recovering the original signal.

6. The process in claim 4 in which adjustment of neighboring points includes scaling the point after the threshold crossing, whereby the degradation process is simple and efficient.

7. The process of claim 6 in which the scaling value is a pseudo-random sequence, whereby increasing the difficulty of illegally recovering the original signal.

8. The process in claim 1 in which every Mth point is degraded in quality.

9. The process in claim 1 in which the content is recovered with a filter that removes most of the content degraded.

10. A process which includes searching the digital data for detection criteria and re-adjusting neighboring point(s) whereby the original digital data is recovered from the degraded data.

11. The process of claim 10 in which the detection criteria involves a pseudo-random sequence, thereby increasing the difficulty to illegally removing the content degradation.

12. The process of claim 10 in which the adjustment of neighboring point(s) involves a pseudo-random sequence, thereby increasing the difficulty to illegally removing the content degradation.

13. The process in claim 10 in which the detection criteria includes a threshold crossing whereby the recovery process is simple and efficient.

14. The process in claim 13 in which adjustment of neighboring points includes re-scaling the point after the threshold crossing by the inverse of the scaling value used in degradation, whereby the recovery process is simple and efficient.

15. The process in claim 10 in which every Mth point is recovered from the degraded digital data.

16. An apparatus consisting of a logic processor and storage unit with a means to implement the efficient and self-synchronizing degradation or recovery process, whereby the apparatus is inexpensive.

17. The apparatus of claim 16 in which the logic processor is a digital processor.

18. The apparatus of claim 17 in which the memory unit is digital random access memory (RAM).

19. The apparatus of claim 16 consisting of a combination of custom digital and analog

circuitry.

20.   The apparatus claim 16 which implements a
filter that removes most of the degraded content.

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